t53_xxreal_2 (TMR2iwgfzdkv2ocpvPiha4R8FqKuZWMPrrk)

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Let $v2\_membered : \iota \Rightarrow o$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $m1\_xxreal\_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_xxreal\_0 : \iota$ be given. Let $v4\_xxreal\_2 : \iota \Rightarrow o$ be given. Let $k2\_xxreal\_0 : \iota$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_tarski : \iota \Rightarrow \iota$ be given. Let $k2\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xxreal\_0 : \iota \Rightarrow o$ be given. Let $k1\_numbers : \iota$ be given. Let $v1\_xreal\_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v2\_membered\ X0) \Rightarrow ((m1\_xxreal\_2\ k2\_xxreal\_0\ X0) \Rightarrow (r1\_tarski\ X0\ (k1\_tarski\ k2\_xxreal\_0))) \tag{1}$$

Assume the following.

$$v4\_xxreal\_2\ (k1\_tarski\ k2\_xxreal\_0) \tag{2}$$

Assume the following.

$$\forall X0.(v2\_membered\ X0) \Rightarrow (\forall X1.(v2\_membered\ X1) \Rightarrow ((r1\_tarski\ X0\ X1) \wedge (v4\_xxreal\_2\ X1)) \Rightarrow (v4\_xxreal\_2\ X0))) \tag{3}$$

Assume the following.

$$\forall X0.k2\_tarski\ X0\ X0 = k1\_tarski\ X0 \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(v2\_membered\ X1) \Rightarrow ((r1\_tarski\ X0\ X1) \Rightarrow (v2\_membered\ X0)) \tag{5}$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0\ X0) \Rightarrow (\neg(\neg X0 \in k1\_numbers) \wedge ((X0 \neq k1\_xxreal\_0) \wedge (X0 \neq k2\_xxreal\_0))) \tag{6}$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0\ X0) \Rightarrow (v2\_membered\ (k1\_tarski\ X0)) \tag{7}$$

Assume the following.

$$\forall X0.(v2\_membered\ X0)\Rightarrow(\forall X1.(m1\_xxreal\_2\ X1\ X0)\Rightarrow (v1\_xxreal\_0\ X1)) \tag{8}$$

Assume the following.

$$k1\_xxreal\_0 = k1\_numbers \tag{9}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0)\Leftrightarrow(X0 \in k1\_numbers) \tag{10}$$

Assume the following.

$$\forall X0.(v2\_membered\ X0)\Rightarrow((v4\_xxreal\_2\ X0)\Leftrightarrow(\exists X1.(v1\_xreal\_0\ X1)\wedge(m1\_xxreal\_2\ X1\ X0))) \tag{11}$$

Theorem 1

$$\forall X0.((v2\_membered\ X0)\wedge(\neg v1\_xboole\_0\ X0))\Rightarrow((\neg\forall X1. (m1\_xxreal\_2\ X1\ X0)\Rightarrow(X1 = k1\_xxreal\_0))\Rightarrow(v4\_xxreal\_2\ X0))$$